Synectics Engineers Bristol Security

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> **Gordon McLanaghan**
> Emergency Control Centre Manager
> for Bristol City Council

Home to over 411,00 people, the city of Bristol is the United Kingdom's ninth most populous city. From medieval town to cutting-edge cultural city and tourist destination, Bristol is a forward thinking city that leads the way in innovation and design. Its rich history of visionaries and pioneers, such as the city's most famous son, Victorian engineer Isambard Kingdom Brunel, still echoes through the city's heart to this day, providing innovative approaches to complex problems. This long standing Bristol trademark has been illustrated recently, with the supply of a unique solution to the city's security surveillance and traffic management issues, at the heart of which is a Synectics control and integration solution.

Managed Expansion

Keen to ensure the safety of visitors and residents alike, Bristol City Council has long seen the advantage of public space surveillance monitoring, both from a security and traffic monitoring perspective—with an initial system of fifteen cameras covering the city centre. Proving successful, and with the help of government funding through a series of managed expansions, the original system has now expanded to over 250 cameras, located throughout the city and many smaller surrounding towns and housing association public areas, via a third party monitoring basis, which provides the Bristol control room with additional revenue.

Growing alongside the public space surveillance network has been a comprehensive system of traffic management cameras, used to track vehicular flow throughout the city's centre since 1997. Originally just 12 cameras were installed at key points throughout the city, now 120 cameras are deployed to keep a watchful eye on traffic movements.

SYNECTICS

The Challenge

Combined Surveillance

With the two large surveillance systems growing independently of each other, duplicated areas of surveillance were becoming common. And with the rapidly expanded camera numbers of the public space system reaching the limit of the ageing control and camera switching equipment, an innovative integrated solution was deemed necessary to create an effective, single surveillance solution. Gordon McLanaghan, Emergency Control Centre Manager for Bristol City Council explains: "With limitless funding, a new matrix and control system wouldn't be a problem, but unfortunately our limited budget for public space surveillance couldn't stretch to that level of new equipment. This was when we realised that pooling our resources with Urban Traffic Control (UTC) and sharing a new solution would be the best way to achieve our joint technical goals.

"With the primary objective being to enable the council's Emergency Control Centre (public space monitoring) and UTC control rooms to access one another's camera networks, and since both the traffic control and public space control rooms have different surveillance priorities, at different times of the day, it would provide an expanded network for both entities at their most critical monitoring periods - in addition to effective failover backup for each control room. Forged through the council's CCTV Strategy Group, we were able to identify the need for a shared matrix and a common control system for both the Emergency Control Centre and UTC centre."

To achieve this, Gordon and his team turned to Security Consultant Derek Maltby, Director of Global MSC Security. Gordon explains: "Enlisting the help of an independent security consultant is an important decision when considering the successful outcome of a project. Employing specialist expertise has a cost, but being sure of procuring the right equipment for a long-term solution is invaluable and more than repays any initial outlay for the consultancy services."

Effective Technology

Derek Maltby continues: "Specifying the correct equipment for this challenging technical project was critical, both to its overall performance and technical support. To ensure we got the best of both, we arranged for prospective manufacturer suppliers to attend a joint presentation of all shortlisted companies to outline the capablities of their systems, alongside a detailed question and answer session. This allowed Gordon and the team to effectively evaluate each product against the other, and to gain a comprehensive insight into each company's technical ability and support.

The Solution

On consideration of the product's technical performance and support we would require from our chosen technical partner for the project, we had no hesitation in selecting Synectics and their SynergyPro Graphical User Interface (GUI), for both the Emergency Control Centre and UTC, to be linked by a common Synectics Tesseract switching matrix."

Gordon elaborates: "It was clear from these trials that to achieve the complex level of integration and control we needed, having the utmost confidence in the supplying manufacturer was of paramount importance. Synectics' technical expertise and their ability to supply a technical solution whatever the scenario, even bespoke to our needs, was very refreshing."

Implementing the project was another challenge, not least because ten years of legacy upgrades had left both the Emergency Control Centre and UTC control room as somewhat of a challenge. Gordon continues: "Due to the complicated integration aspect of the new installation, the council felt the creation of a brand new server room was critical to the success of the project. Totally refurbished, this bespoke facility was located in the lower floor of an existing residential council building, to provide a bespoke secure and controlled environment for the new communications and equipment room. This equipment, located 4 miles from both control rooms is linked, like our camera network, via our own council-owned fibre network.

"Installing the new system's equipment to a strict timescale, and integrating and fully updating two control rooms at the same time, was a huge technical challenge. To fulfil this, we turned to Select Electrics Ltd, who fully managed the difficult project. Their competence meant that the installation was achieved with minimal camera downtime during system changeover."

System Benefits

With the installation of multiple Synectics SynergyPro positions in both the Emergency Control Centre and the

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PROJECT DETAILS

Client
Bristol City Centre

Location
Bristol, UK

Integrator
Select Electrical

Consultant
Global MSC Security

Urban Traffic Control centre, Bristol City Council now enjoys not only a common control and switching platform, but common reporting and evidential handling procedures too. Gordon continues: "Using SynergyPro we can access detailed statistical data at the touch of a button. My target has always been to work towards maximum efficiency and a paperless office. We have now made a huge step towards this, eliminating the time consuming paperwork associated with incidents and prosecutions. Using Synectics' technology, we can now access detailed statistical reports very easily. Not only are these incident reports used to help the council to plan effective deployment of crime reducing resources, but they are also a great way to show our third-party monitoring customers exactly what they are getting for their money. Similarly, we can use them to show new customers exactly what our team, alongside the effective Synectics technology we employ, is capable of. "Simple and intuitive operation of all system functions was a very important factor when selecting the interface and control system. Using SynergyPro, our team of operators can now benefit

from much simplified system functionality, creating a much more efficient and effective work environment. For example, the instant a new operator signs on, comprehensive handover notes are automatically displayed. This smoothes the transition between operator shifts, giving the incoming operator an instant overview of any outstanding situations, and providing instant familiarity right from the start of their shift.

"Because of the extent of our monitored area, following incidents from camera to camera used to be a challenge for new operators unfamiliar with the area. However, using SynergyPro's comprehensive mapping and touch-screen technology, switching cameras to follow incidents is made very easy.

"One touch operation and fast routes to system functionality are critical, illustrated with Synectics' display wall control technology. Selecting one function on the touch screen, automatically displays the surrounding network of cameras on our video wall. This gives an unparalleled overview, not only of the incident under surveillance, but also the surrounding area.

"Our goal from the start was ultimate integration and efficiency, both in making the best of the skills, and our camera network and display wall. Synectics' technology has helped greatly in achieving this, even incorporating bespoke functionality such as the one touch route to our 'talking cameras'. These cameras include speakers mounted on each pole and allow control room operators to talk directly to a monitored subject. This is especially effective in minor public disorder situations or to discourage antisocial behaviour such as the dropping of litter etc. Not only is integrated one touch communication now available, but all speech is recorded

too, giving our operators complete faith that all their actions are being archived."

Traffic Control

In the Bristol Urban Traffic Control Centre, CCTV monitoring focus is prioritised into different areas. Focusing on vehicular movements throughout the city, ensuring highway safety and the continual flow of traffic throughout the city's busy road network.

Again linked to the new remote communications and equipment room via the council's own fibre network, UTC has access to the complete camera network with images displayed for operators on a large rear-projection video wall. In addition to dedicated spot monitors at the five operator positions, each is also equipped with Synectics SynergyPro technology, providing camera switching and control using the same touch screen technology that has yielded so many benefits at the council's Emergency Control Centre.

Adam Crowther, UTC Traffic Signals and ITS Manager explains how the new 'shared' system has benefited traffic management in and around the city: "Since the inception of the new system, our coverage capability has increased dramatically. The innovative use of a 'shared' camera networks is possible thanks to the fact that we have different priority periods for our differing types of surveillance. For us, the priority periods are rush hour times, where as city centre and public space monitoring is at its most active during shopping hours and evening socialising hours.

"Control of our cameras and recording of incidents has become easier and more time economical thanks to the Synectics SynergyPro software

solution, with simple functionality that allows even unfamiliar operators to gain intuitive control. This, along with the flexible display of camera 'groups' on our video wall, at the touch of a button, means we now enjoy an unparalleled overview of any major route in the town centre"

This overview affords UTC operators the information on traffic movement they need. Adam continues: "Our advanced traffic control software is constantly making small adjustment to traffic signals, being supplied with information from ground loops in the road, it provides the maximum flow rate at any one time. However, if for instance a lane is out of action due to road works or an accident, this would not be registered. Using the Synectics-based surveillance system, our operators can constantly update the automatic traffic system with any unforeseen developments. This is where instant access, intuitive control and the scope of the SynergyPro system really benefits us."

Long-Term Results

The success of this innovative approach to the expansion of the CCTV system in Bristol has proved successful both in its technical deployment, and the impact the expanded ability of both control rooms is having on the city, with many successful outcomes since its inception. For example, Emergency Control Centre operators were asked to assist the Serious and Organised Crime Agency (SOCA) in carrying out surveillance on criminals who had travelled to Bristol to carry out a large drugs transaction. With direct involvement of CCTV operators, the operation ended with the arrest of six people and the recovery of £120,000 in cash and 100kgs of cannabis resin. The commander of SOCA praised the professionalism of the team in the Emergency Control Centre and commented that the assistance provided and CCTV evidence obtained was invaluable.

Gordon concludes: "With such a large project, the key to our success has been a managed integration of all CCTV resources across the city, of which the Synectics equipment and technical expertise has played a pivotal role. Using an innovative approach and deploying the right technology has resulted in a successful expansion to all aspects of electronic surveillance that provides a major benefit to both visitors and residents of Bristol".

ADDITIONAL INFORMATION

For further information on the products, services and systems offered by Synectic Systems, visit synecticsglobal.com.

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